What is claimed is:

1. A semiconductor device comprising:

a semiconductor region of a first conductive type;

first and second regions of a second conductive type opposite to the first conductive type, wherein said first and second regions are provided in a surface of said semiconductor region in a predetermined interval;

a third region of said first conductive type which is provided between said first and second regions in said surface of said semiconductor region; and

a fourth region of said first conductive type which is provided below said third region inside said semiconductor region to cover the whole of bottom of said third region at least.

2. The semiconductor device according to claim 1, wherein a position of an impurity peak concentration of said fourth region into a depth direction is deeper than a peak position of an impurity concentration in each of said first and second regions into the depth direction.

3. The semiconductor device according to claim 2, wherein a minimum of an impurity peak concentration

of said fourth region is (1-s)*1.4E16 (atom/cm^4), where said predetermined interval is s.

4. The semiconductor device according to claim 2, wherein the position of the impurity peak concentration in the fourth region into the depth direction is deeper in a range of 0.3 to 0.8 μm than that of the impurity peak concentration in each of said first and second regions.

5. The semiconductor device according to claim 4, wherein a minimum of said impurity peak concentration of said fourth region is (1-s)*1.4E16 (atom/cm^4), where said predetermined interval is s.

6. The semiconductor device according to claim 2, wherein said impurity peak concentration of said fourth region becomes higher as said predetermined interval becomes narrower.

7. The semiconductor device according to claim 1, wherein said fourth region is formed by an ion implantation method.

8. The semiconductor device according to claim 1, wherein said fourth region is formed by an epitaxial growth method.

9. A semiconductor device comprising:

a semiconductor region of a first conductive type;

first and second regions of a second conductive type opposite to the first conductive type, wherein said first and second regions are provided in a surface of said semiconductor region in a predetermined interval;

a third region of said first conductive type which is provided between said first and second regions in said surface of said semiconductor region; and

a fourth region of said first conductive type which is provided below said first to third regions inside said semiconductor region to cover the whole bottoms of said first to third regions.

10. The semiconductor device according to claim 9, wherein a position of an impurity peak concentration of said fourth region into a depth direction is deeper than a peak position of an impurity concentration in each of said first and second regions into the depth direction.

11. The semiconductor device according to claim 10, wherein the position of the impurity peak concentration in the fourth region into the depth

direction is deeper in a range of 0.3 to 0.8 μm than that of the impurity peak concentration in each of said first and second regions.

12. The semiconductor device according to claim 11, wherein a minimum of said impurity peak concentration of said fourth region is (1-s)*1.4E16 (atom/cm^4), where said predetermined interval is s.

13. The semiconductor device according to claim 10, wherein a minimum of said impurity peak concentration of said fourth region is (1-s)*1.4E16 (atom/cm^4), where said predetermined interval is s.

14. The semiconductor device according to claim 10, wherein said impurity peak concentration of said fourth region becomes higher as said predetermined interval becomes narrower.

15. The semiconductor device according to claim 9, wherein said fourth region is formed by an ion implantation method.

16. The semiconductor device according to claim 9, wherein said fourth region is formed by an epitaxial growth method.